Pacific Basin Area Field Office GeoData Structure

Introduction

USDA has developed a set of standards governing the management of GIS data in Field Offices. These standards may be found in the Manual for Managing Geospatial Datasets in Service Centers. These standards identify data geospatial file naming conventions and data location on the Common Computing Environment (CCE) servers. This document includes a description of the type and location of geospatial data that are being distributed to Field Offices in the Pacific Basin.

Data Location

All GIS data will reside on the CCE server and can be accessed from any CCE computer by navigating to the ***F:\geodata*** folder. This folder contains a standard set of "thematic" subfolders. That is, the subfolder names each represent a unique "theme" (or subject) which describes the geospatial data stored in that subfolder. For example, if one wanted to access GIS data for roads, one would navigate to the ***F:\geodata\transportation*** subfolder.

The following set of subfolders will reside on the Local Office Server (F:Drive) in all Pacific Basin Area Field Offices.

air_quality
cadastral
census
climate
common_land_unit
conservation_practices
cultural resources
disaster_events
ecological
elevation
endangered_habitat
environmental_easements
geographic_names
geology
government_units
hazard_site
hydrography
hydrologic_units
imagery
land_site
land_use_land_cover
map_indexes
measurement_services
ortho_imagery
project_data
soils
topographic_images
transportation
wetlands
wildlife
zoning

Some of these subfolders will contain no data until issued by national data development teams, while other data may be developed locally. These subfolders are a first attempt at anticipating the major themes of data that will be used by Service Center Agencies (SCA). Additional folders will be added in the future.

File Naming

The USDA Standard for Geospatial Dataset File Naming defines the naming convention that is used for geospatial data files. File names will, for the most part, follow this format:

<theme>_<feature type>_<geographic location>_<yyyymmdd>

<theme> - A short description identifying what geophysical features are represented by the data
<feature type> - Data is represented as lines (l), polygons (a), points (p), etc.
<geographic location> - Geographic extent of the data is the two letter postal code and county FIPS code or state soil survey ID and island name (if not designated as a county FIPS code.
<yyyymmdd> - Optional year/month/day.

In the Pacific Basin, a typical naming format would be:

<theme>_<feature type>_<state><county><island>_<yyyymmdd>

Example: The ArcView shapefile of farm plot polygons recorded April 4, 2003 on Agrihan island may be named: farmplots_a_mp085agrihan_20030417.shp

If a Service Center administers multiple counties or island states, all of the data for each county (island state} and island will be included within the standard folder structure. In these cases, the *<geographic location>* portion of the file name will differentiate the location of the data layers for filing at the appropriate level.

Example: The Saipan Service Center administers Saipan, Tinian, Rota, and Northern Islands Counties. Therefore the "***transportation***" folder on the Saipan server will house the "roads" shapefile data in the transportation geodata subfolder under Saipan (mp110), Tinian (mp120), Rota (mp100), and Northern Islands(mp085)/Maug island under the appropriate sub-folder for each county and/or Island as illustrated in Table 1:

Table 1. Pacific Basin Area GEODATA Folder Structure.

Geodata Sub-Folder	County Sub-Folder	Island Sub-Folder	File Name
transportation	***northern_islands***	***maug***	roads100k_l_mp085maug
transportation	***rota***		roads100k_l_mp100
transportation	***saipan***		roads100k_l_mp110
transportation	***tinian***		roads100k_l_mp120

Notice that because Rota, Saipan, and Tinian are consider as "Counties", they need no additional island subfolders. The Northern Islands (***northern_islands***) county has a subfolder for each island: ***agrihan***, ***alamagan***, ***anatahan***, ***farallon_de_pagaros***, ***guguan***, ***maug***, ***medinila***, ***pagan***, ***pajaros***, and ***sarigan***. In all cases for the Pacific Basin, if island geodata is available, than add the island name to the <*geographic location*> portion of the name of the file and file under the island name as illustrated in the ***northern_islands*** example above.

Some data layers may be acquired from local sources in the Pacific Basin Area. These layers will be renamed according to the USDA National Standard for Geospatial Datasets.

County FIPS Codes

The <*geographic location*> portion of the file name will be state name followed by the county FIPS code as illustrated in Table 2:

Table 2. Pacific Basin Area FIPS Code Chart.

Field Office	FIPS Code Name	Island Abb.	County Name	County#
Barrigada	Guam	gu		000
Koror	Palau	pw	Aimeliik	002
Koror	Palau	pw	Airai	004
Koror	Palau	pw	Angaur	010
Koror	Palau	pw	Hatoboheit	050
Koror	Palau	pw	Kayangel	100
Koror	Palau	pw	Koror	226
Koror	Palau	pw	Melekeok	212
Koror	Palau	pw	Ngaraard	214
Koror	Palau	pw	Ngarchelong	218
Koror	Palau	pw	Ngardmau	222
Koror	Palau	pw	Ngatpang	224
Koror	Palau	pw	Ngchesar	226
Koror	Palau	pw	Ngernmlengui	227
Koror	Palau	pw	Ngiwal	228
Koror	Palau	pw	Peleliu	350
Pago Pago	American Samoa	as	Eastern	010
Pago Pago	American Samoa	as	Manu'a	020
Pago Pago	American Samoa	as	Rose Island	030
Pago Pago	American Samoa	as	Swains Island	040
Pago Pago	American Samoa	as	Western	050
Pohnpei	Federated States of Micronesia	fm	Chuuk	002
Pohnpei	Federated States of Micronesia	fm	Kosrae	005
Pohnpei	Federated States of Micronesia	fm	Pohnpei	040
Pohnpei	Federated States of Micronesia	fm	Yap	060
Maite	Marshall Islands	mh	Ailinginae	007
Maite	Marshall Islands	mh	Ailinglaplap	010
Maite	Marshall Islands	mh	Ailuk	030
Maite	Marshall Islands	mh	Arno	040
Maite	Marshall Islands	mh	Aur	050
Maite	Marshall Islands	mh	Bikar	060

Field Office	FIPS Code Name	Island Abb.	County Name	County#
Maite	Marshall Islands	mh	Bikini	070
Maite	Marshall Islands	mh	Bokak	073
Maite	Marshall Islands	mh	Ebon	080
Maite	Marshall Islands	mh	Enewetak	090
Maite	Marshall Islands	mh	Erikub	100
Maite	Marshall Islands	mh	Jabat	110
Maite	Marshall Islands	mh	Jaluit	120
Maite	Marshall Islands	mh	Jemo	130
Maite	Marshall Islands	mh	Kili	140
Maite	Marshall Islands	mh	Kwajalein	150
Maite	Marshall Islands	mh	Lae	160
Maite	Marshall Islands	mh	Lib	170
Maite	Marshall Islands	mh	Likiep	180
Maite	Marshall Islands	mh	Majuro	190
Maite	Marshall Islands	mh	Malielap	300
Maite	Marshall Islands	mh	Mejit	310
Maite	Marshall Islands	mh	Mili	320
Maite	Marshall Islands	mh	Namorik	330
Maite	Marshall Islands	mh	Namu	340
Maite	Marshall Islands	mh	Rongelap	350
Maite	Marshall Islands	mh	Rongrik	360
Maite	Marshall Islands	mh	Toke	385
Maite	Marshall Islands	mh	Ujae	390
Maite	Marshall Islands	mh	Ujelang	400
Maite	Marshall Islands	mh	Utrik	410
Maite	Marshall Islands	mh	Wotho	420
Maite	Marshall Islands	mh	Wotje	430
Saipan	Northern Mariana Islands	mp	Northern Islands	085
Saipan	Northern Mariana Islands	mp	Rota	100
Saipan	Northern Mariana Islands	mp	Saipan	110
Saipan	Northern Mariana Islands	mp	Tinian	120

Available Data

The following data will be available at each USDA Service Center within the Pacific Basin for whichever county(s)/islands NRCS administers from that location. All data layers may not be available (or applicable) for all locations. The following file naming examples uses American Samoa (as) state and Eastern (010) county for the FPS location:

F:\geodata - Top folder in the directory structure

air_quality

File naming to be determined.

cadastral

plss_l_as010– Section corners

plss_a_as010 – PLSS Township and Range

census

block_groups00_as010 – 2000 US Census Block Groups

tracts00_as010 – 2000 US Census Tracts

climate\

precip\

precip_a_as010 – Mean annual precipitation by county
precip<*month*>_a_as010 – Mean monthly precipitation by county
precip<*month*>_l_as010 – Boundary of mean monthly precipitation by county

temp\

File naming to be determined.

common_land_unit\

dlu_a_as010 – FSA District Land Units (DLU), farm field boundary layer

fsa_clu\

crp_t_as010 – FSA CRP data linked to CLU
clu_a_as010 – FSA Common Land Unit, Farm Field Boundary
wet_p_as010 – FSA wetland

conservation_practices\

File naming to be determined.

cultural_resources\

File naming to be determined.

disaster_events\

<*disaster_type*>_a_as010_<*date*> - Describes the disaster area with unique identifier for the event, feature type, location, and date.

fsa_facilities\

ffl_p_as010 – Point locations within the county of Fertilizer Facilities
ffsfl_p_as010 - Point locations within the county of Food, Feed, and Seed Facilities

ecological\

File naming to be determined.

elevation\

contour_l_as010 – USGS National Elevation Data Digital Elevation Model, hypsography line data, 1:24,000 scale
ngs_p_as010 – Point location and description of National Geodetic Survey Monuments
ned_<*lalong*> – USGS National Elevation Dataset (NED) merged into a one-degree seamless raster format with elevations portrayed in decimeters.

<*lalong*> is the 2-digit latitude and 3-digit longitude for a one degree block

nez_<*lalong*> - Reprojected USGS NED from adjacent UTM zone merged into one-degree block, 1:24,000 scale
nedshd_<*lalong*> - USGS NED merged into a one-degree seamless shaded relief TIFF and .bil formats, 1:24,000 scale
nezshd_<*nnnnn*> - Reprojected USGS NED from adjacent UTM zone merged into a one-degree seamless shaded relief TIFF and .bil formats, 1:24,000 scale
d<*USGS DEM name*> - USGS DEM ASCII file. USGS standard lat/long name with a “d” leading character

endangered_habitat\

File naming to be determined.

environmental_easements/

wrp_a_as – Aggregation of Wetlands Reserve Program (WRP) easements for State Field Offices

wrp_a_as010 – Aggregation of WRP easements for a specific Service Center area

fsa

flpce_a_as010 – Farm Loan Program Inventory Property (Conservation) easements

flpct_a_as010 – Farm Loan Program Conservation Transfers

dfn_a_as010 – Debt for Nature easements

geographic_names

gnis_p_as010 – Geographic Names Information Systems point data from GNIS cultural and topographic non-populated places files

geology

File naming to be determined

government_units

blm_a_as010 – Bureau of Land Management (BLM)

boundary_l_as010 – USGS boundary line data, 1:24,000 scale

boundary_a_as010 - USGS boundary polygon data, 1:24,000 scale

congdist_<*nnn*>_a_as – Full US Congressional Districts from census TIGER data

<*nnn*> is the Congressional District number, e.g. 108

cities_p_as010 – GNIS populated places point layer

cnty24k_a_as010 – County boundary polygon layer, 1:24,000 scale

cnty24k_l_as010 – County boundaries for cartographic display, 1:24,000 scale

cnty100k_a_as010 – County boundary polygon layer, 1:100,000 scale, from census TIGER data

cnty100k_l_as010 - County boundaries for cartographic display, 1:100,000 scale, from census TIGER data

manfetr_a_as010 – USGS manmade feature polygon

manfetr_l_as010 – USGS manmade feature for cartographic display

ntlforest_a_as010 – National Forest polygon data

ntlforest_l_as010 – National Forest for cartographic display

ntlparks_a_as010 – National Parks polygon data

ntlparks_l_as010 – National Parks for cartographic display

tribal_a_as010 – Native American Lands polygon data

rcd_a_as010 – Full US Resource Conservation & Development Areas polygon data

state_a_pb – Full US state polygons

state_l_pb – Full US state polygons for cartographic display

swed_a_as010 – Full US Soil and Water Conservation District polygon data

urban_a_as010 – Urban area polygons from Census TIGER data, 1:100,000 scale

zip_a_as – Full US zip code points

hazard_site

File naming to be determined

hydrography

damsites_p_as010 – National Inventory of Dams

femaq3_a_as010 – Federal Emergency Management Agency (FEMA) polygon data
hydro24k_l_as010 – USGS hydrography line data 1:24,000 scale
hydro100k_l_as010 - USGS hydrography line data 1:100,000 scale
nhd100k_l_<*sub_basin #*> – USGS/EPA National Hydrography Dataset line data by 8 digit sub basin, 1:100,000 scale
nhd24k_l_<*sub_basin #*> – USGS/EPA National Hydrography Dataset line data by 8 digit sub-basin,1:24,000 scale
ssara_p_as010 – Sole source aquifer recharge areas
watbod_a_as010 – Census TIGER area features for water bodies hydrology, 1:100,000 scale

hydrologic_units

huc250k_a_us – NRCS 8-digit hydrologic unit data for US, 1:250,000 scale
huc250k_a_pb – NRCS 8-digit hydrologic unit data for Pacific Basin, 1:250,000 scale
wbd_a_<*6th level subb huc*> – Hydrologic Unit polygon data by sub-basin at the 4th, 5th, and 6th level, 1:24,000 scale
wbd_a_<*4th level huc*> - Hydrologic Unit polygon data by sub-basin at the 1th, 2th, 3rd and 4th level, 1:24,000 scale

imagery

<*source name*>_as010_<*pathrow*>_<*yyyymmdd*> - Other imagery files such as satellite or non-standard imagery.
<*source name*> - Name of satellite (landstat, ikonos, or quickbird), imaging company, or type, if special, i.e. LIDAR or LSAR
<pathrow> - Path and row of flight line

compliance_fsa

comp_<*latlonquad*>_<*yyyymm*> – Annual Compliance imagery for FSA
<latlonquad> - two numbers for latitude, three numbers for longitude and two numbers for the 01 to 64 quadrangle numbers in the one degree block
slides_as010_<*fffeee*>_<*yyyymm*> – Scanned 35mm or digital slides.
<*fffeee*> - flight and exposure number
slides_as010_t<*nn*>_r<*nn*>_s<*nn*>_<*yyymm*> - Scanned 35mm or digital slides
t<*nn*> - Township, r<*nn*> - Range, s<*nn*> - Section

land_site/

aboveground_storage_p_as010 – County coverage of the location points of any kind of agricultural product aboveground storage facilities.
housing_p_as010 – Location points for instances of housing developments and/or foreclosures, within a county.
lagoon_p_as010 – Location points for lagoons and similar area in a county.
livestock_facility_p_as010 – Location points of feedlots, pig and poultry facilities within a county.
stackyd_a_as010 – Location and shape of stackyards for hay/silage storage in a county.
storage_p_as010 – Location points for grain bins and similar facilities in a county.

underground_storage_p_as010 – Location points for underground storage facilities in a county.
well_p_as010 – Location points of wellheads in a county.

land_use_land_cover
lulc_a_as010 – USGS Land Use Land Cover polygons
nonveg_a_as010 – USGS non-vegetative polygon data (sand area, beach), 1:24,000 scale
nlcd_as_utm<zone> – USGS/EPA National Land Cover Dataset raster data, 30 meter scale
surfcvr_a_as010 – USGS surface cover polygon data (woods, brush, orchard, etc.)
vegdisturb_a_as010 – Vegetation disturbance area data

fsa_compliance/
crl_a_as010_<yyyy> - FSA Crop Reporting Tool data
land_use_a_as010 – FSA Commodity reporting data USA
land_use_d_as010 – FSA Commodity reporting data foreign

map_indexes
napp_p_as010 – National Aerial Photography Program (NAPP) data
quads12k_a_as010 – Quarter quad polygon data, 1:12,000 scale
quads20k_a_as010 – 7.5x7.5 quad polygon data, 1:20,000 scale
quads24k_a_as010 – 7.5x7.5 quad polygon data, 1:24,000 scale
quads25k_a_as010 – 7.5x7.5 and 7.5x15 quad polygon data, 1:25,000 scale
quads63k_a_as010 – 15x15 quad polygons, 1:63,360 scale

measurement_services/
meas_service_a_as010 – Yearly file for all area measurement services

ortho_imagery
ortho_e<*tot tiles*>_as010.sid – APFO MrSID county ortho mosaic of enhanced MDOQ
<*tot tiles*> - total number of tiles in the county mosaic
ortho<*tot tiles*>_as010.sid – NCGC or NRCS MrSID county ortho mosaic of DOQQ
ortho_aspagopago.sid – NRCS ortho mosaic of field office multi-state/county service area
<*a*><*o/c*><*ltlonqn*>_<*qq*>_<*yyyymmdd*> – USGS DOQQ – Raster format (.bil, .bsq, .bip) and APFO .tiff files
<*a*> - leading character can be:
m –all DOQQs present and reside in dative UTM zone
x – there is a missing DOQQ in the DOQ
z – re-projected DOQ into dominant county UTM zone
<*o/c*> - use ‘o’ for black & white or ‘c’ for color imagery
<*ltlongn*> - two numbers for latitude, three numbers for longitude and two numbers for the 01 to 64 quadrangle number in the one degree block
<*qq*> - quarter quad section
<*yyyymmdd*> - optional year/month/day

project_data

Agency specific data - These folders provide a location for project-specific data storage. Additional sub-folders may be created as needed using the project name. Geodata and files should follow USDA Standard for Geospatial Dataset File Naming standards.

fsa

Agency specific data for FSA use. Use the Pacific Basin naming format.

nrcs

Agency specific data for NRCS use. Use the Pacific Basin naming format.

rd

Agency specific data for FSA use. Use the Pacific Basin naming format.
chattel_p_as010 – Known location points for customer-owned, moveable property, in a county. Multiple assets may be linked to a point.

photographs/

chattel_p_<*id no*>_as010 – Photographs associated with the customer chattel points file. Use sequence numbers or other identifier for multiple photos

rcd/

Agency specific data for Resource Conservation Districts. Use the Pacific Basin naming format.

swcd

Agency specific data for Soil and Water Conservation Districts. Use the Pacific Basin naming format

public_utilities/

Use the Pacific Basin naming format.

soils

crpdata_d_as010 – Excel spreadsheet with1990 frozen soils data
mlra_a_us – Full US polygon data of Major Land Resources Area (MLRA) reselected to state area.
soil_d_as010 – Access database of soil survey attribute data in SSURGO structure format.
soil_a_as010 – SSURGO soils polygon data.
soil_l_as010 – Soils special features line data
soil_p_as010 – Soils special features point data
soilmosaic_a_<*FO#*> – Merged SSURGO polygon data for more than one soil survey area to support service center area of service
<*FO#*> - OIP office ID number (not OIP site ID number)
soilmosaic_l_<*FO#*> - Merged SSURGO line feature data for more than one soil survey area to support service center area of service
soilmosaic_p_<*FO#*> - Merged SSURGO point feature data for more than one soil survey area to support service center area of service
ssa_a_as010 – Polygon data limit of Soil Survey Area (SSA)

topographic_images

drg_a_as010.sid – County mosaic of 1:20K, 1:24K Digital Raster Graphs without map collar

drg_a_as<*NFO#*>.sid - NRCS field office multi-county service area DRG mosaic

<*NFO#*> - NRCS field office number

<*a*><*USGS standard name*>_<*yyyy*> – USGS enhanced DRG with map collar removed.

<*a*> - One of the following characters indicating the USGS standard:

c – 1:250,000, 1 x 2 degree topographic map image
f – 1:100,000, 30’ x 60’ topographic map image
g – 1:100,000, 30’ x 60’ planimetric map image
j – 1:30,000, 7.5’ x 7.5’ topographic map image
k – 1:25,000, 7.5’ x 15’ topographic map image
l – 1:25,000, 7.5’ x 7.5’ topographic map image
o – 1:24,000, 7.5’ x 7.5’ topographic map image
p – 1:24,000, 7.5’ x 7.5’ provisional/orthophoto map image
r – 1:20,000, 7.5’ x 7.5’ topographic map image

transportation\

misctrans24k_l_as010 – USGS power transmission lines, substation, pipelines, etc., 1:24,000 scale
misctrans100k_l_as010 - Census TIGER pipeline, power transmission lines, etc., 1:100,000 scale
railroads24k_l_as010 – USGS railroads layer, 1:24,000 scale
railroads100k_l_as010 – Census TIGER railroads layer, 1:100,000 scale
roads24k_l_as010 – USGS roads layer, 1:24,000 scale
roads100k_l_as010 – Census Tiger roads layer, 1:100,000 scale

wetlands\

nwi_a_as010 – F&WS National Wetland Inventory (NWI) polygon data
nwilfetr_l_as010 – NWI linear features, line data
nwi_l_as010 – NWI outlines for cartographic display, polygon data
nwi_p_as010 – NWI point data
wetland_l_as010 – Boundaries of natural or constructed wetlands, by county

The following sub folders can be added as an additional layer of subfolders under each of the major ***geodata/*** theme folders:

gps_data/

<*subject*>_xd_<*geographic location*>_<*yyyymmdd*>.mps - GPS download file
<*subject*>_xd_<*geographic location*>_<*yyyymmdd*>.dxf - GPS download export file
<*subject*>_<*data type*>_<*geographic location*>_<*yyyymmdd*>.shp - GPS shape file

photographs/

<*identifier*>_y_<*yyyymmdd*>_<*sequence number*> - Photo name made up of the following:

<*identifier*> - Subject of the photo, i.e. “taro_patch_johana_farm”.
<*yyyymmdd*> - Date indicating when photo was taken.
<*sequence number*> - If multiple pictures were taken, a sequence number (i.e. 1,2,3) can be added to give each photo a unique name.

Geodata Component Files

Geodata formats are composed of a complex of files and databases that are linked to produce the images, maps and data reports. Here we will call them "component files". The following will introduce an awareness of the complexity of geodata and how to safely rename and move the files.

Shapefile

Every shapefile will be composed of the following three files:

.shp – Feature geometry
.shx – Feature geometry index
.dbf - Dbase file containing feature attribute data (ArcView table)

Additionally, the following file types may also exist:

.sbn and .sbx – Spatial index of features
.ain and .aix – Attribute index for active fields in a table

For example, the shapefile "cnty24k_a_as010" is actually made up of three different files: "cnty24k_a_as010.shp", "cnty24k_a_as010.dbf", and "cnty24k_a_as010.shx". Similarly, the DOQ mosaic image "ortho1-1_as010" might be composed of the files "ortho1-1_as010.sid" and "ortho1-1_as010.sdw".

Shapefiles may be moved as a group to another folder. Renaming is more difficult because of internal references that link the files together. In ArcView, shape file themes may be 'Saved as' and placed in another directory with a different name, or use the ArcCatalog program in ArcGIS to safely change shapefile names and locations. Another program designed to assist in migrating shapefiles is the GeoData Conversion Utility.

This program is designed to assist in renaming and moving ArcView .avx and shapefiles files.

ArcInfo Coverages

An ArcInfo coverage is made up of a related set of databases and files describing points, vectors, and attribute data. The database files must reside in an ArcInfo workspace directory and in its Info database folder. To move or make changes in the location of any of the coverage's files or Info database folder will disassociate the databases and destroy the coverage. The best method of changing the names and locations of ArcInfo coverages is to use the ArcCatalog program in ArcGIS or know how to use the ArcInfo system.

Image component files

Images differ from shapefiles in that they are generally composed of just two files: one data file containing a blanket-like coverage of the image data, and either a "world file" which identifies what location on the face of the Earth that "blanket" covers, or a "header file" which contains information describing the image data.

Depending on image format, the following file types may exist:

GeoTIFF format:
.tif – data file
.tfw – world file

MrSID format:
.sid – data file
.sdw – world file

Binary sequential (BSQ), interleaved by pixel (BIP), interleaved by line (BIL) formats:

.bsq/.bip/.bil – data file
.hdr – header file

Additionally, BSQ/BIL/BIP files may also possess a "colormap" file that contains color information for each pixel, and a "statistics" file that contains statistical information about the data value of each pixel. These image files must be moved as a group. To change these files, it is best to 'open' them in a viewer and 'Save as' a new named file and location.

For more information, go to the USDA Service Center for Agencies Geographic Information Systems or their Geodata Management website.